

REMARKS

Claims 1-24 are pending in the above-captioned patent application after this amendment. Claims 1-22 have been rejected. The specification has been amended. Claims 1 and 12-22 have been amended, and claims 23-24 have been added for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office pursuant to 65 Fed. Reg. 54603 (September 8, 2000), even though the Applicant believes that the previously pending claims were allowable.

Support for the amendments to the claims and for the new claims can be found throughout the originally filed application, including the originally filed claims, the drawings and the specification. More specifically, support for the amendments to claims 1 and 12-22 and for the new claims can be found at least in Figures 1-4, in claims 1-22, and in the specification at page 3, line 17 through page 7, line 17.

No new matter is believed to have been added by this amendment. Consideration of the pending application is respectfully requested.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-22 are rejected under 35 U.S.C. § 112, second paragraph, "as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation 'A method' in claim. There is insufficient antecedent basis for this limitation in the claim. ... Claim 12 recites the limitation 'An apparatus' in claim. There is insufficient antecedent basis for this limitation in the claim. Although the Applicant respectfully disagrees that there is insufficient antecedent basis because "A" and "An" are used in the preamble of each rejected independent claim, the Applicant has amended claims 1 and 12 as set forth previously. Thus, the rejection is believed to be moot.

Rejections Under 35 U.S.C. § 101

Claims 1-22 are rejected under 35 U.S.C. § 101 because the claim invention is directed to non-statutory subject matter. Although the Applicant respectfully disagrees that the claims are directed to non-statutory subject matter, the Applicant has amended claims

1 and 12 as set forth previously. Thus, the rejection is believed to be moot.

Rejections Under 35 U.S.C. § 103

Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,649,196 to Woodhill et al. The Applicant has amended claim 1 and claims 12-22 as set forth above. Regardless of the amendments, the Applicant respectfully submits that the rationale and analysis of Woodhill et al. is inaccurate as set forth below, and as a consequence, amended claims 1-22 are believed to be allowable because the cited reference does not teach or suggest the features of amended claims 1-22.

Woodhill et al. is directed toward a system and method for distributed storage management using binary object identifiers. The system disclosed in Woodhill et al. includes a remote backup server 12, a wide area network 14 and a plurality of local area networks 16, each having one or more local computers 20. Each local computer 20 has a disk drive 19 that includes a Distributed Storage Manager program 24, a File Database 25, and compressed storage files 32 that are created by the Distributed Storage Manager program 24. (Col. 3, lines 25-44). The File Database 25 stores information relating to each file that has been backed up by the Distributed Storage Manager program 24 since the initialization of that program on each local computer 20. (Col. 3, lines 49-53). The information that is stored by the File Database 25 includes many pieces of data, including those illustrated in Figure 3 of Woodhill et al. Further, the Distributed Storage Manager program 24 builds and maintains a Backup Queue Database 26 on one of the disk drives 19 on each local computer 20. (Col. 4, lines 48-52; Figure 4).

Woodhill et al. teaches that storage of data occurs in two ways. First, "the Distributed Storage Manager program 24 stores a compressed copy of every binary object it would need to restore every disk drive 19 on every local computer 20 somewhere on the local area network 16 other than on the local computer 20 on which it normally resides." (Col. 9, lines 30-36; Emphasis added). Woodhill et al. further states that "the binary object currently processed is compressed and stored in a compressed storage file 32 on one of the disk drives 19 on a local computer 20 on the

local area network 16 other than the local computer 20 on which the binary object is currently stored." (Col. 9, lines 60-66; Emphasis added).

In other words, data from one disk drive 19 is backed up and stored on a separate local computer 20, not on the same disk drive 19. Stated another way, the disk drives 19 being referred to in Woodhill et al. are not backup storage devices; they are primary storage devices that are backed up on other devices. More specifically, data that normally resides on one local computer 20 is stored in compressed form on different disk drives 19 of different local computers 20. (Col. 9, lines 30-36). Moreover, Woodhill et al. does not teach or suggest that data is stored in uncompressed form on one storage device, which is then later compressed and restored on the same storage device.

The second way that Woodhill et al. teaches that data is stored occurs when the Distributed Storage Manager program 24 transmits every new or changed binary object to the remote backup file server 12. (Col. 9, lines 36-38). This step occurs "where each compressed storage file 32, when it reaches a maximum manageable size (e.g. two (2) megabytes), is transmitted to the remote backup file server 12 (Fig. 1) over wide area network 14 for long-term storage and retrieval. Upon arrival of the compressed storage file 32 at the remote backup file server 12, software resident on the remote backup file server 12 routes the compressed storage file 32 for ultimate storage to magnetic tape or other low cost storage media." (Col. 10, lines 13-22). Thus, the files are already compressed when they are transmitted to the remote backup storage server 12, rather than transmitting the files in uncompressed form, then later compressing the files at a more convenient time.

Accordingly, using either method disclosed by Woodhill et al., there is no teaching or suggestion that data is received and stored by a backup storage device, then is later restored in compressed form on the same backup storage device.

Additionally, the Patent Office states in its rejection that "it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to include the idle period because the idle time for scheduling backup provides efficient backup procedures." The Applicant respectfully disagrees with the rejection by the

Patent Office that is based on this premise. In fact, Woodhill et al. expressly teaches that compressed data is saved directly to the backup storage server 12, without the need for scheduling or determining a time that would not interfere with the initial backup of data. Woodhill et al. does not teach or suggest expediting the initial backup procedure by first storing uncompressed data, then converting it to compressed data at a later time.

In contrast to Woodhill et al., amended claim 1 is directed toward a “method for storing data, comprising the steps of: defining a duty cycle for the downloading of data to a backup storage device, the duty cycle having a backup window period and an idle period; receiving data during the backup window period; storing the data on the backup storage device during the backup window period; retrieving the data stored on the backup storage device during the idle period after the backup window period; compressing the data retrieved from the backup storage device during the idle period; and re-storing the data compressed during the idle period in compressed form on the backup storage device to reclaim space on the storage device.” These steps are not taught or suggested by Woodhill et al. Therefore, a rejection of amended claim 1 under 35 U.S.C. § 103(a) is unsupported by the cited reference. Because claims 2-11 depend directly or indirectly from claim 1, a rejection of these claims under 35 U.S.C. § 103(a) would also be unsupported by the cited reference.

Further, amended claim 12 requires “a backup storage device; an input/output port; and a controller configured to transmit data received from the input/output port to the backup storage device during a backup period and then reclaim storage space on the backup storage device during an idle period following the backup period by retrieving the data stored on the backup storage device, compressing the retrieved data, and then re-storing the compressed data on the backup storage device.” These features are not taught or suggested by Woodhill et al. Therefore, a rejection of amended claim 12 under 35 U.S.C. § 103(a) is unsupported by the cited reference. Because claims 13-22 depend directly or indirectly from claim 12, a rejection of these claims under 35 U.S.C. § 103(a) would also be unsupported by the cited reference.